a discrete-time sampling circuit having a predetermined sampling frequency, the discrete-time sampling circuit coupled to the noise shaping network to generate an output signal with a lower transition rate with respect to the predetermined sampling frequency by a predetermined multiple.

8. The modulation stage of claim 1, wherein the sampling circuit further comprises a logic circuit for suppressing sampling of the input signal for a set number of clock cycles of a sampling frequency clock.

9. The modulation stage of claim 2, wherein the logic circuit further comprises a transition detector for detecting a transition in the output signal.

10. The modulation stage of claim 1, wherein the output signal has a multi-state output, having at least three states.

11. A digital amplifier comprising:
a modulation stage for signal shaping; and
an H-bridge controller which generates a multi-state output.

12. The digital amplifier of claim 5, wherein the H-bridge controller a multi-state output, includes at least three states.

13. The digital amplifier of claim 6, wherein the H-bridge controller has two output terminals, and the output signal on each terminal is independently controlled.

14. A digital amplifier, comprising:

a summation circuit for summing an input signal with a feedback signal, and generating a summed output signal;

a noise shaping network with an input coupled to the output of the summation circuit and generating a noise shaped signal;

a sampling stage with an input connected to the output of the nosie shaping network, and generating a sampled signal, the sampling stage having a predetermined sampling frequency, and generating an output signal with a lower transition rate with respect to the sampling frequency by a predetermined multiple;

a feedback loop providing the output of the sampling stage to the summation circuit and the noise shaping circuit; and

an output stage with inputs connected to the output of the sampling stage and generating an output signal.

15. The digital amplifier of claim 8, wherein the output stage includes an H-bridge controller.

16. The digital amplifier of claim 8, wherein the sampling circuit further comprises a logic circuit for suppressing sampling of the input signal for a set number of clock cycles of the sampling frequency clock.

17. The digital amplifier of claim 10, wherein the logic circuit further includes a transition detector for detecting a transition in the output signal.

18. The digital amplifier of claim 8, wherein the output signal of the sampling stage has a multi-state output, with at least three states.

19. The digital amplifier of claim 8, wherein the noise shaping network comprises a plurality of integrator stages.

20. A digital amplifier, comprising:

a summation circuit for summing an input signal with a feedback signal, and generating a summed output signal;

a noise shaping network with an input coupled to the output of the summation circuit and generating a noise shaped signal;

a sampling stage with an input connected to the output of the noise shaping network, and generating an output signal with a multi-state output, with an least three states;

a feedback loop providing the output of the sampling stage to the summation circuit and the noise shaping circuit; and

an output stage with inputs connected to the output of the sampling stage and generating an output signal.

21. The digital amplifier of claim 14, wherein the output stage includes an H-bridge controller.

22. The digital amplifier of claim 14, wherein the sampling circuit generates an output signal with a lower transition rate with respect to the sampling frequency by a predetermined multiple.

23. The digital amplifier of claim 14, wherein the sampling circuit further comprises a logic circuit for suppressing sampling of the input signal for a set number of clock cycles of the sampling frequency clock.

24. The digital amplifier of claim 17, wherein the logic circuit further comprises a transition detector for detecting a transition in the output signal.